

IN THE CLAIMS:

1. (Previously Presented) A broadcasting apparatus that broadcasts a specific program to which a reproduction time period between a starting time and a finishing time is specified, the reproduction being performed by a receiving apparatus, the broadcasting apparatus comprising:

5 allotment unit operable to allot a broadcasting bandwidth for the reproduction time period to the specific program and allotting a part of the broadcasting bandwidth for a preceding time period immediately before the reproduction time period to the specific program and the other part of the broadcasting bandwidth to another program;

script generation unit operable to generate (a) when receiving a storage
10 instruction, a script instructing the receiving apparatus to store program data of the specific program in a storage unit of the receiving apparatus, and (b) when receiving a reproduction instruction, a script instructing the receiving apparatus to reproduce the program data of the specific program in a case where the program data of the specific program has been stored in the storage unit;

15 message generation unit operable to generate a plurality of storage instructions and a reproduction instruction;

transmission unit operable to (a) in accordance with the result of allotment by the allotment unit, repeatedly transmit program data of the other program while transmitting the program data of the specific program in the preceding time period, and repeatedly transmitting
20 the program data of the specific program in the reproduction time period, and (b) repeatedly transmit the scripts in a time period when the program data of the specific program is transmitted; and

control unit operable to control the transmission unit to transmit the storage instructions in the preceding time period and to transmit the reproduction instruction at the
25 starting time,

wherein the transmission unit further transmits a normal program that includes a video stream and an audio stream,

the specific program has the program data that relates to a commercial message which is inserted in the normal program, and

30 the reproduction time period of the specific program is the same as a broadcast time period of the commercial message.

2. (Previously Presented) The broadcasting apparatus of Claim 1,

wherein the allotment unit allots the broadcasting bandwidth for the preceding time period so that the part of the broadcasting bandwidth becomes narrower than the other part of the broadcasting bandwidth, and

5 the preceding time period is longer than a time period that is necessary for transmitting the program data of the specific program at least once using the part of the bandwidth.

3. (Cancelled)

4. (Previously Presented) The broadcasting apparatus of Claim 1, further comprising:

a storage unit for storing as the program data of the specific program (a) first contents data that makes up the specific program and (b) second contents data that is different
5 from the first contents data in part,

wherein the transmission unit transmits the first contents data in the preceding time period and transmits the second contents data in the reproduction time period of the specific program.

5-8. (Cancelled)

9. (Previously Presented) A broadcasting apparatus that transmits a data broadcasting program and a first and a second specific programs which are inserted in the data broadcasting program, a total time period between a starting time and a finishing time for broadcasting the data broadcasting program including a first time period during which the first
5 specific program is broadcast and a second time period during which the second specific program is broadcast, the broadcasting apparatus comprising:

allotment unit operable to

(a) allot a part of the broadcasting bandwidth to the first and the second specific programs and the other part of the broadcasting bandwidth to the data broadcasting
10 program for all of the time periods other than the first and the second time periods in the total time-period, and

(b) allot a part of the broadcasting bandwidth to the first specific program and the other part of the broadcasting bandwidth to the second specific program for the first and the second time periods;

15 script instruction generation unit operable to (i) generate (a) when receiving a first storage instruction, a script instructing the receiving apparatus to store program data of the first specific program in a storage unit of the receiving apparatus and (b) when receiving a second storage instruction, a script instructing the receiving apparatus to store program data of the second specific program in the storage unit and (ii) generate (a) when receiving a first

20 reproduction instruction, a script instructing the receiving apparatus to reproduce the program data of the first specific program in a case that the program data of the specific program has been stored in the storage unit and (b) when receiving a second reproduction instruction, a script instructing the receiving apparatus to reproduce the program data of the second specific program in a case that the program data of the second specific program has been stored in the storage unit;

25 message generation unit operable to generate a plurality of first storage instructions, a plurality of second storage instructions, a first reproduction instruction and a second reproduction instruction;

transmission unit operable to

(a) repeatedly transmit the scripts during the total time period, and

30 (b) in accordance with the result of allotment by the allotment unit,

(i) transmit repeatedly the program data of the data broadcasting program during all of time periods other than the first and the second time periods in the total time period, and

(ii) transmit repeatedly the program data of each of the first and the

35 second specific programs during the total time period; and

control unit operable to control the transmission unit so as to transmit (a) the first storage instructions before the first time period (b) the first reproduction instruction at the starting time of the first time period (c) the second storage instructions before the second time period, and (d) the second reproduction instruction at the starting time of the second time period,

40 wherein the transmission unit further transmits a normal program that includes a video stream and an audio stream,

the first specific program and the second specific program respectively have the program data that relates to a first commercial program and a second commercial program which are inserted in the normal program, and

45 the first time period and the second time period respectively are the same as broadcast time periods of the first commercial program and the second commercial program.

10. (Cancelled)

11. (Previously Presented) The broadcasting apparatus of Claim 9, further comprising:

storage unit operable to store as the program data of the first specific program (a) first contents data that makes up the first specific program and (b) second contents data that is
5 different from the first contents data in part,

wherein the transmission unit transmits the first contents data in a time period other than the first time period in the total time period, and transmits the second contents data in the first time period.

12. (Previously Presented) A broadcasting apparatus that transmits a data broadcasting program and a first and a second specific programs which are inserted in the data broadcasting program, the broadcasting apparatus comprising:

allotment unit operable to

5 (a) allot a broadcasting bandwidth for a first time period and a second time period to the first specific program and the second specific program, the first time period and the second time period are included in a total time period between a starting time and a finishing time for broadcasting the data broadcasting program, and

(b) allot (1) a broadcasting bandwidth to the data broadcasting data program
10 in the total time period except for the first time period and the second time period (2) a part of
the broadcasting bandwidth to the first specific program for a time period preceding to the first
time period in the total time period, and (3) a part of the broadcasting bandwidth to the second
specific program for a time period preceding to the second time period in the total time period;

script instruction unit operable to (i) generate (a) when receiving a first storage
15 instruction, a script instructing the receiving apparatus to store program data of the first specific
program in a storage unit of the receiving apparatus and (b) when receiving a second storage
instruction, a script instructing the receiving apparatus to store program data of the second
specific program in the storage unit and (ii) generate (a) when receiving a first reproduction
instruction, a script instructing the receiving apparatus to reproduce the program data of the first
20 specific program in a case that the program data of the specific program has been stored in the
storage unit and (b) when receiving a second reproduction instruction, a script instructing the
receiving apparatus to reproduce the program data of the second specific program in a case that
the program data of the second specific program has been stored in the storage unit;

message generation unit operable to generate a plurality of first storage
25 instructions, a plurality of second storage instructions, a first reproduction instruction and a
second reproduction instruction;

transmission unit operable to

- (a) repeatedly transmit during the total time period, and
- (b) in accordance with the result of allotment by the allotment unit,

30 (i) transmit repeatedly the program data of the data broadcasting
program during all of time periods other than the first and the second time periods in the total
time period,

(ii) transmitting repeatedly the program data of the first specific program during the first time period and the time period preceding to the first time period, and

35 (iii) transmitting repeatedly the program data of the second specific program during the second time period and the time period preceding to the second time period;
and

unit operable to control the transmission unit so as to transmit (i) a plurality of the first storage instructions before the first time period (ii) a plurality of the second storage
40 instructions before the second time period (iii) the first reproduction instruction at the starting time of the first time period, and (iv) the second reproduction instruction at the starting time of the second time period,

wherein the transmission unit further transmits a normal program that includes a video stream and an audio stream,

45 the first specific program and the second specific program respectively have the program data that relates to a first commercial program and a second commercial program which are inserted in the normal program, and

the first time period and the second time period respectively are the same as broadcast time periods of the first commercial program and the second commercial program.

50 13. (Cancelled)

14. (Previously Presented) The broadcasting apparatus of Claim 12, further comprising:

storage unit operable to store as the program data of the first specific program (a) first contents data that makes up the first specific program and (b) second contents data that is
55 different from the first contents data in part,

wherein the transmission unit transmits the first contents data in a time period preceding to the first time period in the total time period, and transmits the second contents data in the first time period.

15. (Previously Presented) A broadcasting method for broadcasting a specific program to which a reproduction time period between a starting time and a finishing time is specified, the reproduction being performed by a receiving apparatus, the broadcasting method comprising the steps of:

5 an allotment step for allotting a broadcasting bandwidth for the reproduction time period to the specific program and allotting a part of the broadcasting bandwidth for a preceding time period immediately before the reproduction time period to the specific program and the other part of the broadcasting bandwidth to another program;

10 a script generation step for generating (a) when receiving a storage instruction, a script instructing the receiving apparatus to store program data of the specific program in a storage unit of the receiving apparatus, and (b) when receiving a reproduction instruction, a script instructing the receiving apparatus to reproduce the program data of the specific program in a case where the program data of the specific program has been stored in the storage unit;

15 a message generation step for generating a plurality of storage instructions and a reproduction instruction;

 a transmission step for (a) in accordance with the result of allotment in the allotment step, repeatedly transmitting program data of the other program while transmitting the program data of the specific program in the preceding time period, and repeatedly transmitting the program data of the specific program in the reproduction time period, and (b) repeatedly

20 transmitting the scripts in a time period when the program data of the specific program is transmitted;

a control step for controlling a transmission unit to transmit the storage instructions in the preceding time period and to transmit the reproduction instruction at the starting time,

25 wherein, in the transmission step, a normal program that includes a video stream and an audio stream is further transmitted,

the specific program has the program data that relates to a commercial message which is inserted in the normal program, and

the reproduction time period of the specific program is the same as a broadcast
30 time period of the commercial message.

16. (Previously Presented) A broadcasting method for broadcasting a data broadcasting program and a first specific program and a second specific program which are inserted in the data broadcasting program, a total time period between a starting time and a finishing time for broadcasting the data broadcasting program including a first time period
5 during which the first specific program is broadcast and a second time period during which the second specific program is broadcast, the broadcasting method comprising the steps of:

an allotment step for

(a) allotting a part of the broadcasting bandwidth to the first and the second specific programs and the other part of the broadcasting bandwidth to the data broadcasting
10 program for all of time periods other than the first and the second time periods in the total time period, and

(b) allotting a part of the broadcasting bandwidth to the first specific program and the other part of the broadcasting bandwidth to the second specific program for the first and the second time periods;

15 a script instruction generation step for (i) generating (a) when receiving a first storage instruction, a script instructing the receiving apparatus to store program data of the first specific program in a storage unit of the receiving apparatus and (b) when receiving a second storage instruction, a script instructing receiving apparatus to store program data of the second specific program in the storage unit, and (ii) generating (a) when receiving a first reproduction
20 instruction, a script instructing the receiving apparatus to reproduce the program data of the first specific program in a case that the program data of the specific program has been stored in the storage unit and (b) when receiving a second reproduction instruction, a script instructing the receiving apparatus to reproduce the program data of the second specific program in a case that the program data of the second specific program has been stored in the storage unit;

25 a message generation step for generating a plurality of first storage instructions, a plurality of second storage instructions, a first reproduction instruction and a second reproduction instruction; and

 a transmission step for

 (a) repeatedly transmitting the scripts during the total time period,
30 transmitting the first storage instructions before the first time period (ii) the first reproduction instruction at the starting time of the first time period (iii) the second storage instructions before the second time period, and (iv) the second reproduction instruction at the starting time of the second time period, and

 (b) in accordance with the result of allotment by the allotment step,

35 (i) transmitting repeatedly the program data of the data broadcasting program during all of time periods other than the first and second time periods in the total time period, and

(ii) transmitting repeatedly the program data of each of the first and the second specific programs during the total time period;

40 wherein, in the transmission step, a normal program that includes a video stream and an audio stream is further transmitted,

the first and the second specific programs have the program data that relates to first and second commercial messages, respectively, which are inserted in the normal program, and

45 the reproduction time period of the specific program is the same as a broadcast time period of the commercial message.

17. (Previously Presented) A broadcasting method for broadcasting a data broadcasting program and a first specific program and a second specific program which are inserted in the data broadcasting program, the broadcasting method comprising the steps of:

an allotment step for (a) allotting a broadcasting bandwidth for a first time period
5 and a second time period to the first specific program and the second specific program, the first time period and the second time period are included in a total time period between a starting time and a finishing time for broadcasting the data broadcasting program, and (b) allotting (1) a broadcasting bandwidth to the data broadcasting data program in the total time period except for the first time period and the second time period (2) a part of the broadcasting bandwidth to the
10 first specific program for a time period preceding to the first time period in the total time period,

and (3) a part of the broadcasting bandwidth to the second specific program for a time period preceding to the second time period in the total time period;

15 a script instruction generation step for (i) generating (a) when receiving a first storage instruction, a script instructing the receiving apparatus to store program data of the first specific program in a storage unit of the receiving apparatus and (b) when receiving a second storage instruction, a script instructing the receiving apparatus to store program data of the second specific program the storage unit, and (ii) generating (a) when receiving a first reproduction instruction, a script instructing the receiving apparatus to reproduce the program data of the first specific program in a case that the program data of the specific program has been
20 stored in the storage unit and (b) when receiving a second reproduction instruction, a script instructing the receiving apparatus to reproduce the program data of the second specific program in a case that the program data of the second specific program has been stored in the storage unit;

25 a message generation step for generating a plurality of first storage instructions, a plurality of second storage instructions, a first reproduction instruction and a second reproduction instruction; and

a transmission step for
repeatedly transmitting (i) the first storage instructions before the first time period (ii) the second storage instructions before the second time period (iii) the first reproduction instruction at the starting time of the first time period, and (iv) the second reproduction
30 instruction at the starting time of the second time period, during the total time period, and

(b) in accordance with the result of allotment by the allotment unit,

(i) transmitting repeatedly the program data of the data broadcasting program during all of time periods other than the first and the second time periods in the total time period,

35 (ii) transmitting repeatedly the program data of the first specific program during the first time period and the time period preceding to the first time period, and

(iii) transmitting repeatedly the program data of the second specific program during the second time period and the time period preceding to the second time period;
and

40 wherein, in the transmission step, a normal program that includes a video stream and an audio stream is further transmitted,

the first and the second specific programs have the program data that relates to first and second commercial messages, respectively, which are inserted in the normal program,
and

45 the reproduction time period of the specific program is the same as a broadcast time period of the commercial message.

18. (Previously Presented) A program recording medium which is readable for a computer in a broadcasting apparatus, the broadcasting apparatus broadcasts a specific program to which a reproduction time period between a starting time and finishing time is specified, the reproduction being performed by a receiving apparatus, a computer program embodied on the
5 program recording medium has the computer conduct the steps of:

an allotment step for allotting a broadcasting bandwidth for the reproduction time period to the specific program and allotting a part of the broadcasting bandwidth for a preceding time period immediately before the reproduction time period to the specific program and the other part of the broadcasting bandwidth to other program;

10 a script generation step for generating (a) when receiving a storage instruction, a script instructing the receiving apparatus to store program data of the specific program in a

storage unit of the receiving apparatus, and (b) when receiving a reproduction instruction, a script instructing the receiving apparatus to reproduce the program data of the specific program in a case where the program data of the specific program has been stored in the storage unit;

15 a message generation step for generating a plurality of storage instructions and a reproduction instruction; and

 a transmission step for (a) in accordance with the result of allotment in the allotment step, repeatedly transmitting program data of the other program while transmitting the program data of the specific program in the preceding time period, and repeatedly transmitting
20 the program data of the specific program in the reproduction time period, and (b) repeatedly transmitting the scripts in a time period when the program data of the specific program is transmitted;

 a control step for controlling the transmission unit to transmit the storage instructions in the preceding time period and to transmit the reproduction instruction at the
25 starting time,

 wherein, in the transmission step, a normal program that includes a video stream and an audio stream is further transmitted,

 the specific program has the program data that relates to a commercial message which is inserted in the normal program, and

30 the reproduction time period of the specific program is the same as a broadcast time period of the commercial message.

19. (Previously Presented) A program recording medium which is readable for a computer in a broadcasting apparatus, the broadcasting apparatus transmits a data broadcasting program and a first and a second specific programs which are inserted in the data broadcasting

program, a total time period between a starting time and a finishing time for broadcasting the
5 data broadcasting program including a first time period during which the first specific program is
broadcast and a second time period during which the second specific program is broadcast, a
computer program embodied on the program recording medium has the computer conduct the
steps of:

an allotment step for

10 (a) allotting a part of the broadcasting bandwidth to the first and the second
specific programs and the other part of the broadcasting bandwidth to the data broadcasting
program for all of time periods other than the first and the second time periods in the total time
period, and

(b) allotting a part of the broadcasting bandwidth to the first specific program
15 and the other part of the broadcasting bandwidth to the second specific program for the first and
second time periods;

a script instruction generation step for (i) generating, when receiving a first
storage instruction, a script instructing the receiving apparatus to store program data of the first
specific program in a storage unit of the receiving apparatus and (b) when receiving a second
20 storage instruction, a script instructing the receiving apparatus to store program data of the
second specific program in the storage unit, and (ii) generating (a) when receiving a first
reproduction instruction, a script instructing the receiving apparatus to reproduce the program
data of the first specific program in a case that the program data of the specific program has been
stored in the storage unit and (b) when receiving a second reproduction instruction, script
25 instructing the receiving apparatus to reproduce the program of the second specific program; in a
case that the program data of the second specific program has been stored in the storage unit;

a message generation step for generating a plurality of first storage instructions, a plurality of second storage instructions, a plurality of second storage instructions, a first reproduction instruction and a second reproduction instruction; and

30 a transmission step for,

repeatedly transmitting the scripts during the total time period, transmitting (i) the first storage instructions before the first time period, the first reproduction instruction at the starting time of the first time period (iii) the second storage instructions before the second time period, and (iv) the second reproduction instruction at the starting time of the second time period,

35 (b) in accordance with the result of allotment by the allotment step,

(i) transmitting repeatedly the program data of the data broadcasting program during all of time periods other than the first and the second time periods in the total time period, and

(ii) transmitting repeatedly the program data of each of the first and the
40 second specific program during the total time period;

wherein, in the transmission step, a normal program that includes a video stream and an audio stream is further transmitted,

the first and the second specific programs have the program data that relates to first and second commercial messages, respectively, which are inserted in the normal program,
45 and

the reproduction time period of the specific program is the same as a broadcast time period of the commercial message.

20. (Previously Presented) A program recording medium which is readable for a computer in a broadcasting apparatus, the broadcasting apparatus transmits a data broadcasting

program and a first and a second specific programs which are inserted in the data broadcasting program, a computer program embodied on the program recording medium has the computer

5 conduct the steps of:

an allotment step for (a) allotting a broadcasting bandwidth for a first time period and a second time period to the first specific program and the second specific program, the first time period and the second time period are included in a total time period between a starting time and a finishing time for broadcasting the data broadcasting program, and (b) allotting (1) a
10 broadcasting bandwidth to the data broadcasting data program in the total time period except for the first time period and the second-time period (2) a part of the broadcasting bandwidth to the first specific program for a time period preceding to the first time period in the total time period, and (3) a part of the broadcasting bandwidth to the second specific program for a time period preceding to the second time period in the total time period;

15 a script instruction generation step for (i) generating (a) when receiving a first storage instruction, a script instructing the receiving apparatus to store program data of the first specific program in a storage unit of the receiving apparatus and (b) when receiving a second storage instruction, a script instructing the receiving apparatus to store program data of the second specific program in the storage unit and (ii) generating (a) when receiving a first
20 reproduction instruction, a script instructing the receiving apparatus to reproduce the program data of the first specific program in a case that the program data of the specific program has been stored in the storage unit and (b) when receiving a second reproduction instruction, a script instructing the receiving apparatus to reproduce the program data of the second specific program in a case that the program data of the second specific program has been stored in the storage unit;

25 a message generation step for generating a plurality of first storage instructions, a plurality of second storage instructions, a first reproduction instruction and a second reproduction instruction; and

 a transmission step for

 repeatedly transmitting (i) the first storage instructions before the first time period
30 (ii) the second storage instructions before the second time period (iii) the first reproduction instruction at the starting time of the first time period, and (iv) the second reproduction instruction at the starting time of the second time period, and

 (b) in accordance with the result of allotment by the allotment step

 (i) transmitting repeatedly the program data of the data broadcasting
35 program during all of time periods other than the first and the second time periods in the total time period, and

 (ii) transmitting repeatedly the program data of each of the first specific program during the first time period and the time period preceding to the first timer period; and

40 (iii) transmitting repeatedly the program data of the second specific program during the second time period and the time period preceding to the second time period;

 wherein, in the transmission step, a normal program that includes a video stream and an audio stream is further transmitted,

 the first and the second specific programs have the program data that relates to
45 first and second commercial messages, respectively, which are inserted in the normal program, and

 the reproduction time period of the specific program is the same as a broadcast time period of the commercial message.

21. (Previously Presented) A program that is readable for a computer in a broadcasting apparatus, the broadcasting apparatus broadcasts a specific program to which a reproduction time period between a starting time and finishing time is specified, the reproduction being performed by a receiving apparatus, the program has the computer conduct the steps of:

5 an allotment step for allotting a broadcasting bandwidth for the reproduction time period to the specific program and allotting at part of the broadcasting bandwidth for a preceding time period immediately before the reproduction time period to the specific program and the other part of the broadcasting bandwidth to other program;

 a script generation step for generating (a) when receiving a storage instruction, a
10 script instructing the receiving apparatus to store program data of the specific program in a storage unit of the receiving apparatus, and (b) when receiving a reproduction instruction, a script instructing the receiving apparatus to reproduce the program data of the specific program in a case where the program data of the specific program has been stored in the storage unit;

 a message generation step for generating a plurality of storage instructions and a
15 reproduction instruction; and

 a transmission step for (a) in accordance with the result of allotment in the allotment step, repeatedly transmitting program data of the other program while transmitting the program data of the specific program in the preceding time period, and repeatedly transmitting the program data of the specific program in the reproduction time period, and (b) repeatedly
20 transmitting the scripts in a time period when the program data of the specific program is transmitted;

a control step for controlling the transmission unit to transmit the storage instructions in the preceding time period and to transmit the reproduction instruction at the starting time,

25 wherein, in the transmission step, a normal program that includes a video stream and an audio stream is further transmitted,

 the specific program has the program data that relates to a commercial message which is inserted in the normal program, and

 the reproduction time period of the specific program is the same as a broadcast
30 time period of the commercial message.

22. (Previously Presented) A program that is readable for a computer in a broadcasting apparatus, the broadcasting apparatus transmits a data broadcasting program, and a first and a second specific programs which are inserted in the data broadcasting program, a total time period between a starting time and a finishing time for broadcasting the data broadcasting
5 program including a first time period during which the first specific program is broadcast and a second time period during which the second specific program is broadcast the program has the computer conduct the steps of:

 an allotment step for

 (a) allotting a part of the broadcasting bandwidth to the first and the second
10 specific programs and the other part of the broadcasting bandwidth to the data broadcasting program for all of time periods -other than the first and the second time periods in the total time period, and

(b) allotting a part of the broadcasting bandwidth to the first specific program and the other part of the broadcasting bandwidth to the second specific program for the first and
15 the second time periods;

a script instruction generation step for (i) generating (a) when receiving a first storage instruction, a script instructing the receiving apparatus to store program data of the first specific program in a storage unit of the receiving apparatus and (b) when receiving a second storage instruction, a script instructing receiving apparatus to store program data of the second
20 specific program in the storage unit, and (ii) generating (a) when receiving a first reproduction instruction, a script instructing the receiving apparatus to reproduce the program data of the first specific program in a case that the program data of the specific program has been stored in the storage unit and (b) when receiving a second reproduction instruction, a script instructing the receiving apparatus to reproduce the program data of the second specific program of the second
25 specific program has been stored in the storage unit;

a message generation step for generating a plurality of first storage instructions, a plurality of second storage instructions, a first reproduction instruction and a second reproduction instruction; and

a transmission step for,

30 (a) repeatedly transmitting the scripts during the total time period, transmitting the first storage instructions before the first time period (ii) the first reproduction instruction at the starting time of the first time period (iii) the second storage instructions before the second time period, and (iv) the second reproduction instruction at the starting time of the second time period,

35 (b) in accordance with the result of allotment by the allotment step,

(i) transmitting repeatedly the program data of the data broadcasting program during all of time periods other than the first and the second time periods in the total time period, and

(ii) transmitting repeatedly the program data of each of the first and the
40 second specific program during the total time period;

wherein, in the transmission step, a normal program that includes a video stream and an audio stream is further transmitted,

the first and the second specific programs have the program data that relates to first and second commercial messages, respectively, which are inserted in the normal program,
45 and

the reproduction time period of the specific program is the same as a broadcast time period of the commercial message.

23. (Previously Presented) A program that is readable for a computer in a broadcasting apparatus, the broadcasting apparatus transmits a data broadcasting program and a first and a second specific programs which are inserted in the data broadcasting program, the program has the computer conduct the steps of:

5 an allotment step for (a) allotting a broadcasting bandwidth for a first time period and a second time period to the first specific program and the second specific program, the first time period and the second time period are included in a total time period between a starting time and a finishing time for broadcasting the data broadcasting program, and (b) allotting (1) a broadcasting bandwidth to the data broadcasting data program in the total time period except for
10 the first time period and the second time period (2) a part of the broadcasting bandwidth to the first specific program for a time period preceding to the first time period in the total time period,

and (3) a part of the broadcasting bandwidth to the second specific program for a time period preceding to the second time period in the total time period;

15 a script instruction generation step for (i) generating (a) when receiving a first storage instruction, a script instructing the receiving apparatus to store program data of the first specific program in a storage unit of the receiving apparatus and (b) when receiving a second storage instruction, a script instructing the receiving apparatus to store program data of the second specific program in the storage unit, and (ii) generating (a) when receiving a first reproduction instruction, a script instructing the receiving apparatus to reproduce the program data of the first specific program in a case that the program data of the specific program has been
20 stored in the storage unit and (b) when receiving a second reproduction instruction, a script instructing the receiving apparatus to reproduce the program data of the second specific program in a case that the program data of the second specific program has been stored in the storage unit;

a message generation step for generating a plurality of first storage instructions, a
25 plurality of second storage instructions, a first reproduction instruction and a second reproduction instruction; and

a transmission step for

(a) repeatedly transmitting (i) the first storage instructions before the first time period (ii) the second storage instructions before the second time period (iii) the first
30 reproduction instruction at the starting time of the first time period, and (iv) the second reproduction instruction at the starting time of the second time period, and

(b) in accordance with the result of allotment by the allotment unit,

(i) transmitting repeatedly the program data of the data broadcasting program during all of time periods other than the first and the second time periods in the total
35 time period, and

(ii) transmitting repeatedly the program data of each of the first specific program during the first time period and the time period preceding to the first timer period; and

(iii) transmitting repeatedly the program data of the second specific
40 program during the second time period and the time period preceding to the second time period;

wherein, in the transmission step, a normal program that includes a video stream and an audio stream is further transmitted,

the first and the second specific programs have the program data that relates to first and second commercial messages, respectively, which are inserted in the normal program,

45 and

the reproduction time period of the specific program is the same as a broadcast time period of the commercial message.

24. (Previously Presented) A broadcasting method for reducing television receiver latencies in displaying the interactive content portion of broadcast television commercials, the method comprising the steps of:

5 assigning a television program to a first time slot and a commercial to a second time slot immediately after the first time slot;

allocating a first portion of the available bandwidth of the first time slot to audiovisual content of the television program;

allocating a second portion of the available bandwidth of the first time slot to a specific program having interactive content for the commercial;

10 allocating a first portion of the available bandwidth of the second time slot to the specific program;

allocating a second portion of the available bandwidth of the second time slot to
audiovisual content of the commercial;

15 transmitting the audiovisual content of the television program during the first time
slot;

repeatedly transmitting the specific program during the first time slot;
transmitting the audiovisual content of the commercial during the second time
slot; and

repeatedly transmitting the specific program during the second time slot.

25. (Previously Presented) The broadcasting method of claim 24 further comprising
transmitting a script for storing the specific program.

26. (Previously Presented) The broadcasting method of claim 25 further comprising
transmitting a script for executing the specific program.

27. (Previously Presented) The broadcasting method of claim 24 wherein the specific
program is transmitted in the first and second time slots in a carousel type format.

28. (Previously Presented) The broadcasting method of claim 24 further comprising
receiving and storing the specific program.